# EFFICACY OF PROTECT B READY-TO-USE METHOPRENE BASED PHARAOH'S ANT *MONOMORIUM PHARAONIS* L. (HYMENOPTERA: FORMICIDAE) CONTROL BAIT UNDER FIELD CONDITIONS

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Efficient control and eradication of Pharaoh's ant is a difficult task for PCOs mostly due to the fact that several queens live in a nest, all of which can not be killed with traditional methods. PROTECT B Pharaoh's ant killer bait is a special ready-to-use formulation that contains an insect growth regulator (IGR), a juvenile hormone analogue (juvenoid) methoprene. This compound prevents queens from laying eggs and disrupts development of ant larvae and pupae into adults. All of these effects result in dying out of the whole colony.

The aim of our field tests was to assess the attractivity of baits, the changes in the size of ant populations as well as to determine the appropriate dosages required. We also wanted to know whether additional treatments with fast acting insecticides are necessary for better efficacy. Investigations were carried out separately in Hungary and Poland using infested flats in houses. Under experimental conditions 1.6 g quantities of ready-to-use granulated baits containing 0.5 % methoprene were tested in plastic blister packs placed along foraging routes of worker ants. Studies were conducted with several regular observations until total disappearance of ants from flats.

For determining dosages which can be recommended for the practice, the number of ants in each premise (room, kitchen, bathroom) was assessed by means of a 4- or 5-degree observation scale. Subsequent new packs with bait substance were used in connection with the actual requirements. At each observation the change in the size of ant population was registered.

Results gave good evidence that PROTECT B baits exerted proper attractivity to Pharaoh's ants but also detected that the number of worker ants near the baits in the first 3 to 4 weeks was greater than before. Nevertheless, significant reduction of ant populations occurred after 6 to 7 weeks, and their complete disappearance was observed at the end of the 3$^{rd}$ month of experiment.

Our tests demonstrated that spraying with other insecticides for total eradication is not necessary. At the end of baiting period, however, killing of the few remaining workers with contact insecticides can be useful. For total eradication of Pharaoh's ant populations – depending on infestation rates – placement of 10 to 20 blister packs (16 to 32 g bait substance with 0.5% methoprene)/ 80 m$^2$ surface is recommended.

Further field tests with new, safer types of bait stations are in progress both in Europe and USA.



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Wm H. Robinson, F. Rettich and G.W. Rambo (editors). 1999.